toll road, a distance of 9 miles. This is a tremendous overload, but it cannot be said that the truck was injured by it. In fact, it is probable that the truck parts were not weakened in any way by this test, for the road, while

problem is to know what is suited and to weigh properly the arguments of the salesman who offers a 2-ton truck with a 15-h.p. motor and a 25-h.p. rear axle, and the counter arguments of his rival, whose truck has a 25-h.p.

Table I.—Total Cost of Operating Gasoline Motor Trucks at Various Daily Mileages.

Capacity of truck.	Cost in dollars.	Horsepower.	Miles per hour.	Miles per gallon of gasoline.	Daily mileage.	Estimated life, years.	Total mileage.	Costs for entire life of truck, in dollars. Insurance, fire and liability.	License and taxes	Interest at 6 per cent.	Depreciation.	Administration.	Garaging.	Gasoline at 16 ct. per gal.	Oil, grease and waste.	Tires (less first cost).	Driver's salary.	Inspection and maintenance.	Total.	Cost per day, dollars.	Cost per mile, dollars	Cost per ton-mile, dollars.
Light delivery wagon	600	18	25	15	25	5	37,500	200	40	180	600	35	180	400	190	225	2,400	750	5,200	3.47	0.139	0.417
					50	2½	37,500	100	25	90	500	20	90	400	190	225	1,200	655	3,495	4.66	0.096	0.288
					75	1½	33,750	60	20	55	450	10	55	360	170	200	900	505	2,785	6.19	0.082	0.246
1,500 lbs.	1,100	22	20	12	25	6	45,000	300	65	400	1,100	110	215	600	340	270	3,600	1,010	8,010	4.45	0.178	0.237
					50	3	45,000	150	50	230	950	55	110	600	340	270	1,800	900	5,455	6.06	0.121	0.161
					75	2	45,000	100	30	130	850	35	70	600	340	270	1,440	790	4,655	7.76	0.103	0.137
1 ton	1,875	24	19	8	25	10	75,000	850	220	1,125	1,875	225	480	1,500	560	1,340	7,200	1,900	17,275	5.76	0.230	0.230
					50	6½	97,500	550	140	730	1,690	140	310	1,950	730	1,800	4,680	1,900	14,620	7.50	0.150	0.150
					75	4	90,000	300	85	395	1,500	90	170	1,800	675	1,640	3,468	1,800	11,815	9.85	0.131	0.131
1½ tons	2,150	25	18	7	25	10	75,000	1,000	235	1,290	2,150	255	600	1,710	560	1,505	7,200	2,000	18,505	6.17	0.247	0.165
					50	6½	97,500	650	150	840	1,935	170	390	2,230	730	2,025	4,680	2,000	15,800	8.10	0.162	0.109
					75	4	90,000	350	95	450	1,725	100	210	2,055	675	1,850	3,360	1,900	12,770	10.64	0.142	0.095
2 tons	2,625	26	17	6	25	10	75,000	1,150	265	1,575	2,625	315	720	2,000	750	1,840	7,200	2,250	19,440	6.90	0.276	0.138
					50	6½	97,500	750	195	1,025	2,360	205	470	2,600	975	2,475	4,680	2,250	17,985	9.22	0.184	0.092
					75	4	90,000	400	110	550	2,100	125	250	2,400	900	2,255	3,360	2,100	14,550	12.12	0.162	0.081
3½ tons	3,500	32	14	5	25	10	75,000	1,350	380	2,100	3,500	415	960	2,400	750	2,345	9,600	3,250	25,700	9.02	0.361	0.103
					50	6½	97,500	875	245	1,365	3,150	270	625	3,120	975	3,150	6,240	3,250	23,265	11.93	0.239	0.068
					75	4	90,000	460	150	735	2,800	165	335	2,880	900	2,870	3,840	3,000	18,135	15.11	0.201	0.057
5 tons	4,600	35	12	3½	25	10	75,000	1,760	440	2,760	4,600	550	1,200	3,430	750	2,680	10,800	4,000	32,970	10.99	0.439	0.088
					50	6½	97,500	1,145	285	1,845	4,140	360	780	4,460	975	3,600	7,020	4,000	28,610	14.67	0.297	0.059
					75	4	90,000	800	180	965	3,680	220	480	4,115	900	3,280	4,320	3,600	22,340	18.62	0.223	0.044
6½ tons	5,000	40	10	3	25	10	75,000	1,875	525	3,000	5,000	590	1,320	4,000	940	3,015	10,800	5,000	36,065	12.02	0.481	0.074
					50	6½	97,500	1,220	350	1,950	4,500	380	860	5,200	1,220	4,050	7,020	5,000	31,750	16.35	0.326	0.050

steep, is firm and smooth. The writer does not wish to encourage overloading, which has been responsible for many truck failures and against which much has been written, but he does wish to point out that an occasional overload of 25 per cent. or even 50 per cent. when handled

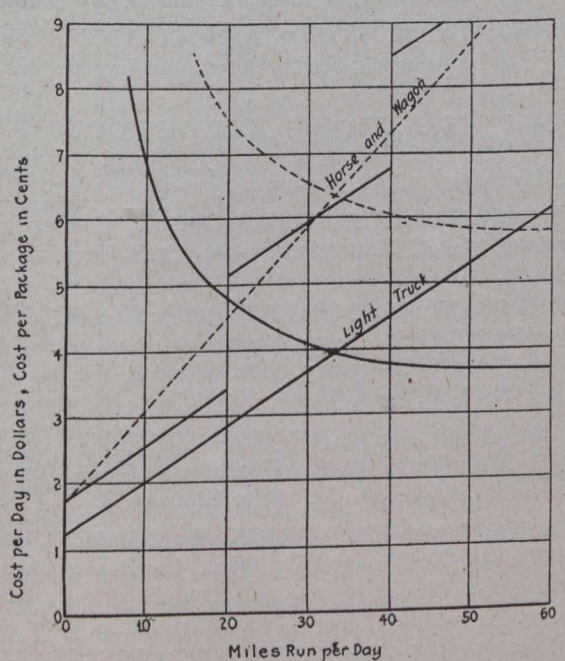

Fig. 4.—Comparison of Single Horse and Wagon and Light Delivery Truck Costs.

carefully on a good road is not a serious matter, while to haul a heavy truck day after day, loaded at half capacity, is a very serious matter if one would haul cheaply.

It is possible to buy a truck that is suited for work on good roads or one that is especially designed for rough roads, mud, steep hills and severe service generally. The

motor and a 20-h.p. rear axle. This is one of the surprising results of the modern method of building up assembled parts into a truck, and, while there may be advantages of such variations in the relative strength of truck parts for some particular service, it is a fact that both extremes are being sold for exactly the same work. The Society of Automobile Engineers has done a wonderful work in standardizing the parts for auto trucks. This will be

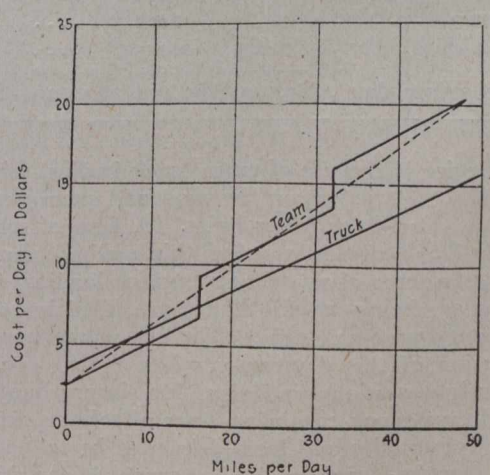

Fig. 5.—Comparison of Costs for 5-Ton Gasoline Truck and Heavy Teams.

carried much further in the future, for the economies that will result from standardized parts and also from standardized assemblies have been strongly emphasized by the experience of European countries with the use of trucks in the present war.

At present the truck owner or prospective purchaser is sadly in need of disinterested advice, and there is a good engineering field for the man who thoroughly knows trucks and can plan service. There is little doubt but